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EXAMINER

BECK, ALEXANDER S

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/858,109

Applicant(s)

COK, RONALD S.

Examiner

Alexander S. Beck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Acknowledgement is made of the amendment filed by the Applicant on 01/24/2005, in which: independent Claims 1 and 9 were amended; and the rejections of Claims 1,3-9,11 and 12 were traversed. **Claims 1,3-9,11 and 12** are currently pending in U.S. Application Serial No. 09/858,109, and an Office Action on the merits follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1,3,8 and 9** are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. (US 6,424,325 B2, hereinafter "Yamazaki").

As to independent **Claim 1**, Yamazaki teaches/suggests an active matrix OLED flat-panel color display (*see Yamazaki: col 1, ln 8-14; FIG. 1*), comprising:

a) a plurality of light emitting elements **142** for emitting light of different colors and a plurality of associated control circuits **140,141,143** for individually controlling the plurality of light emitting elements (*see Yamazaki: col 3, ln 41-44; col 7, ln 14-52; FIG. 4*);

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b) a programmable power supply **204,205,206** connected to the plurality of associated control circuits (via power lines **V1-V_x**) (*see Yamazaki: col 12, ln 6-62; FIG. 6*);

c) a separate sensor **136** for sensing each color of light emitted by the display to produce a feedback signal for each color (via sensor output wiring **FL**) (*see Yamazaki: col 6, ln 52-65; col 11, ln 46-48; col 12, ln 6-8; FIG. 3*); and

d) a display controller **202,203** responsive to the respective feedback signals for programming the programmable power supply to compensate for changes in the light output from the light emitting elements (*see Yamazaki: col 12, ln 6-62; FIG. 6*).

As to **Claim 3**, Yamazaki teaches/suggests separate programmable power supplies for each color in the flat-panel display (*see Yamazaki: col 12, ln 56-62*).

As to **Claim 8**, Yamazaki teaches/suggests wherein the programmable power supply is addressable as a storage element (i.e., element **204**) (*see Yamazaki: col 12, ln 6-62; FIG. 6*).

As to independent **Claim 9**, Yamazaki teaches/suggests a method of controlling an active matrix OLED flat-panel color display having a plurality of differently colored light emitting elements **142** and a plurality of associated control circuits **140,141,143** for individually controlling the plurality of light emitting elements (*see Yamazaki: col 1, ln 8-14; col 3, ln 41-44; col 7, ln 14-52; FIG. 1,4*), comprising the steps of:

a) providing a programmable power supply **206** for each color connected to the plurality of associated control circuits (*see Yamazaki: col 12, ln 6-62; FIG. 6*);

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b) sensing the light output for each color of one or more light emitting elements to produce a feedback signal for each color (*see Yamazaki: col 6, ln 52-65; col 11, ln 46-48; col 12, ln 6-8; FIG. 3*); and

c) programming the programmable power supply in response to the respective feedback signal to compensate for changes in the light output from the light emitting elements (*see Yamazaki: col 12, ln 6-62; FIG. 6*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 4-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki.

As to **Claims 4 and 5**, note the above discussion with respect to Claim 1. Yamazaki does not disclose expressly wherein the programmable power supply is on a common substrate with the display (*see Claim 4*) or on a separate substrate from the display (*see Claim 5*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to locate the programmable power supply on either the display substrate or on a separate substrate because the mere "shift in location of a part", such as the location of the programmable power supply, can not be used to distinguished over the prior art without a showing of "unexpected results". (*In re Japikse 86 USPQ 70 ccpa 1950*).

The suggestion/motivation for positioning the programmable power supply on a common substrate with the display would have been to reduce power loss due to not having long wires delivering the power. The suggestion/motivation for positioning the programmable power supply on a separate substrate would have been to reduce weight and size of a separate display.

As to **Claim 6 and 7**, note the above discussion with respect to Claim 1. Yamazaki does not disclose expressly wherein the programmable power supply is in a common package with the display (*see Claim 4*) or in a separate package from the display (*see Claim 5*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to locate the programmable power supply in either a common package with the display or in a separate package from the display because the mere "shift in location of a part", such as the location of the programmable power supply, can not be used to distinguished over the prior art without a showing of "unexpected results". (*In re Japikse* 86 USPQ 70 ccpa 1950).

The suggestion/motivation for positioning the programmable power supply in a common package with the display would have been to reduce power loss due to not having long wires delivering the power. The suggestion/motivation for positioning the programmable power supply in a separate package would have been to reduce weight and size of a display on a desk.

6. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki in view of Fan (US 6,473,065 B1, hereinafter "Fan").

As to **Claims 11 and 12**, note the above discussion with respect to Claim 9. Yamazaki teaches/suggests the method wherein the display is a color display that includes a controller **210** (*see Yamazaki: col 12, ln 6-62; FIG. 6*).

Yamazaki does not disclose expressly wherein the controller has a lookup table for receiving device independent code values and producing device dependent code values and further comprising the step of calibrating the controller by changing the lookup table to correct for the color balance of the display.

Fan teaches/suggests a method of controlling an OLED flat-panel display including a driving controller **70,80** having a lookup table **70** for receiving device independent code values (i.e., desired light intensity values: I_1, I_2, I_3, \dots , and I_K) and producing device dependent code values (i.e., corresponding voltage to illuminate pixel at desired light intensity values: $V_1(i,j)$, $V_2(i,j)$, $V_3(i,j)$, ..., and $V_K(i,j)$) and further comprising the step of calibrating the controller by changing the lookup table (*see Fan: col 2, ln 18-26; col 6, ln 14-46*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the OLED display of Yamazaki, such that a lookup table was provided to retrieve a calibrated driving voltage for each pixel in accordance with a desired light intensity. The display controller **210** of Yamazaki uses an arithmetic circuit **203** to calculate a driving voltage in accordance with a desired light intensity. Incorporating the lookup table of Fan, as explained above, would obviate the need for calculating a driving voltage with an arithmetic circuit, as the driving voltage would be obtained through the use of a lookup table.

The suggestion/motivation for doing so would have been to improve display uniformity (*see Fan: col 1, ln 6-8*)

Examiner notes that the above embodiment, as taught/suggested by Yamazaki and Fan, suppresses luminance reduction and improves display uniformity, which inherently corrects for the balance of color in a color display.

Response to Arguments

7. Applicant's arguments with respect to Claims 1,3-9,11 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Alexander S. Beck** whose telephone number is **(571) 272-7765**. The examiner can normally be reached on M-F, 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Sumati Lefkowitz** can be reached on **(571) 272-3638**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

asb



KENT CHANG
PRIMARY EXAMINER